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09/837,190	04/19/2001	Hideki Sawada	2000P120495	1193

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EXAMINER

VENT, JAMIE J

ART UNIT PAPER NUMBER

2621

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,190

Applicant(s)

SAWADA, HIDEKI

Examiner

Jamie Vent

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 9-12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 5,966,495) in view of Tanaka et al (US 6,163,646) in further view of Honda et al (US 6,608,938) in further view of Shaw et al (US 6,404,928).

[claim 1]

In regard to Claim 1, Takahashi et al discloses a real time recording/reproducing system for converting an analog image signal in an analog-to-digital converter (ADC) to digital data, recording the digital data in a recorder, reading out the digital data recorded in the recorder and converting the read-out digital data in a digital-to-analog converter (DAC) to analog data to be outputted (Column 5 Lines 35+ through Column 6 Lines 1-67 describes the recording/reproducing system), the real time recording/reproducing system comprising:

- a first frame memory for storing the output of the ADC (Figure 1 shows a first frame memory 18 for storing the output of the ADC);

- a compression processing module for compressing the output of the first frame memory (Figure 1 shows the compressing circuits 10 and 11 as further described in Column 5 Lines 45-55);
- a decompression processing module for decompressing the digital data read out from the recorder (Figure 1 shows a decompressing/expanding circuits 24 and 25 as further described in Column 5 Lines 45-55);

however, fails to disclose

- a second frame memory for storing the output of the decompression processing module and outputting the stored data to the DAC; and
- a frame rate controller for controlling the compression processing module to hold a constant intrinsic frame rate by executing frame interpolating processing.

Tanaka et al discloses an apparatus for synchronizing the playback of audio and video signals wherein a second frame memory is used for storing the decompressed data before outputting to the DAC. This process is seen in Figure 1 wherein the compressed data buffers 11 and 21 store the information before outputting to the decoders 12 and 22 for converting the signal to an analog signal as further described in Column 4 Lines 25-40. The additional frame memory of the storage of the decompressed data will allow the synchronization of the output of data.

Additionally, Honda et al discloses an image data compression apparatus wherein a frame rate controller controls the compression of the frames to hold a

constant frame by executing an interpolating process as seen in Figure 11 and further described in Column 3 Lines 64+ through Column 4 Lines 1-17 and additionally in Column 13 Lines 59+ through Column 14 Lines 1-36. The frame rate controller allows for a higher quality image and recording of the image.

Shaw et al discloses a system for producing a quantized signal through a frame rate controller that controls the compression of the signal (Figure 11b). Furthermore, as described in Column 8 Lines 11-28 describes the compression of the signal in order to hold an intrinsic frame rate that provides the system a proper interfacing of communications by holding the frame rate to be compatible to other systems.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the recording/reproducing apparatus, as disclosed by Takahashi et al, and further incorporate a system wherein a second frame memory is available for storing the decompressed data before outputting to the DAC, as disclosed by Tanaka et al, and further incorporate a frame rate controller for controlling compression, as disclosed by Honda et al, which holds a constant intrinsic frame rate by executing frame interpolating processing, as disclosed by Shaw et al.

[claim 9]

In regard to Claim 9, Takahashi et al discloses a real time recording/reproducing system wherein the compression module and the decompression processing modules are constituted by central processing software processing parts (Figure 1 shows a control processing unit wherein software is used for processing of various data).

[claim 10]

In regard to Claim 10, Takahashi et al discloses a real time recording/reproducing system wherein the ADC is a video capture card and the DAC is a graphic accelerator card (Figure 1 shows an analog digital converter and a digital analog converter).

[claim 11]

In regard to Claim 11, Takahashi et al discloses a real time recording/reproducing system wherein first and second frame memories are main memory and video memory (Figure 2 shows the frame memories comprising first and second memories within the main memory)

[claim 12]

In regard to Claim 12, Takahashi et al discloses a real time recording/reproducing system wherein the recorder is constituted by a hard disc drive (Figure 1 shows the memory unit wherein it is well known in the art that the memory unit can consist of a hard disc drive as the recording memory unit).

2. Claims 2,3,4, 6, and 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 5,966,495) in view of Tanaka et al (US 6,163,646) in further view of Honda et al (US 6,608,938) in further view of Shaw et al (US 6,404,928) in further view of Honda et al (US 2004/0240744).

[claims 2 & 6]

In regard to Claims 2 and 6 discloses a synchronizing playback system, as previously recited in Claim 1; however fails to disclose the additional limitation of a frame rate controller for controlling the frame rate of the compression processing module to be

constant by executing a frame interpolating process. Honda et al discloses an image data compression system wherein the frame rate of the compression module is controlled by the constant executing a frame rate interpolating process as seen in Figure 18 and further described in paragraphs 0025,0034, and 101-103. The frame rate being kept constant through interpolating process generates digital data in a more effective manner without losing data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the synchronizing of data system, as disclosed by Takahashi et al in view of Tanaka et al in further view of Honda et al, and further incorporate a system wherein the frame rate is kept constant by a frame interpolating process, as disclosed by Honda et al.

[claim 3]

In regard to Claim 3 discloses a synchronizing playback system, as previously recited in Claim 1; however, fails to disclose with the additional limitation of a decompression processing module for decompressing the digital data read out from the recorder and executing a frame skipping processing when it becomes unable to execute full frame time decompression. Honda et al discloses a system wherein the decompression module reads out from the recorder and executes frame skipping as further described in Paragraphs 0067-0072. The frame skipping when it becomes unable to execute a full frame during decompression allows for the digitizing of the signal in a more efficient and effective manner. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the synchronizing of data system, as disclosed by Takahashi et al in view of Tanaka et al in view of Honda, and further incorporate a

system wherein the frame skipping occurs during the decompressing when a full frame rate unable to occur, as disclosed by Honda et al.

[claims 4 & 7]

In regard to Claims 4 and 7, Takahashi et al in view of Tanaka et al in further view of Honda et al, discloses a synchronizing time recording/reproducing system; however, fails to discloses a frame thinning-out in the decompression processing module and the frame skipping in the decompression processing module are performed preferentially from frame-interpolation frames to generate digital compressed data involving much motion. Honda et al discloses an image data decompression system wherein frames are thinned out during decompression processing and furthermore can be performed from frame-interpolation frame as disclosed in Paragraphs 0071-0074. Thereby providing a process to do real-time recording and synchronizing the reproduction of the data. Therefore, it would have been obvious to one of ordinary skill in the art to modify the synchronizing of data system, as disclosed by Takahashi et al in view of Tanaka et al, and further incorporate a system wherein frame thinning-out is used for synchronization purposes, as disclosed by Honda et al.

3. Claims 5 and 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 5,966,495) in view of Tanaka et al (US 6,163,646) in further view of Honda et al (US 6,608,938) in further view of Shaw et al (US 6,404,928) in further view of Honda et al (US 2004/0240744) in further view of Fujinami et al (US 6,697,566).

[claims 5 & 8]

In regard to Claims 5 and 8, Takahashi et al in view of Tanaka et al in further view of Honda et al as previously discussed in Claim 2, discloses a synchronizing time recording/reproducing system; however, discloses a real time recording/reproducing system wherein the compression processing modules adds data bit stream data including a picture header representing the start of a frame compression code, a user data representing a thinned-out frame and a reference frame code representing the same frame as a reference frame. Fujinami et al discloses a system wherein signals are encoded with the characteristic recording information and furthermore added to the data bit stream as disclosed in Column 26 Lines 50+ through Column 27 Lines 1-25. The addition of the picture header frame representing the start of the compression code further allows for synchronization of data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the synchronizing recording/reproducing system, as disclosed by Takahashi et al in view of Tanaka et al in further view of Honda et al, and incorporate the addition of picture headers regarding various information regarding the compression times, as disclosed by Fujinami et al.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- . Oku et al (US 6710817);
- . Kim (US 6862402).

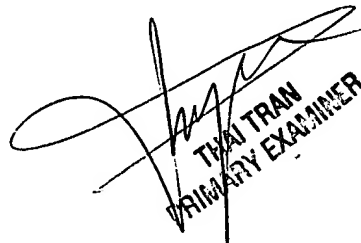
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamie Vent whose telephone number is 571-272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jamie Vent
07/06/06



THAI TRAN
PRIMARY EXAMINER